DMR 3

C: APPLICATION COVER SHEET FOR AN EXPERIMENTAL LEASE

Name: Joseph Porada

Address: 138 Main St/ PO Box 1624

City: Blue Hill

County: Hancock

State, zip: Maine, 04614

Telephone: home: 207 479 0322 cell: same

Email address: Personal: woods1water2@yahoo.com Business: pending

Accepted as Complete 6/28/06

	town	county	waterbody
Location of lease site:	Trenton	Hancock	Goose Cove

Additional description (e.g. south of B Island): Between Haynes Point and Oak Point

Total acreage requested: (2-acre maximum) 2 acres

Lease Term requested: (3-year maximum) 3 years

Name of species to be cultivated, common and scientific names:

Quahog, Littleneck , Cherry stone, Mercenaria mercenaria

Name and address of the source of seed stock, juveniles, smolts, etc., to be cultivated:

Downeast Institute for Applied Marine Research & Education
37 Wildflower Lane: PO Box 83, Beals, Maine 04611

Amount of application fee enclosed: $100 for each of 3 applications
($100 payable to: Treasurer, State of Maine)

I hereby state that the information included in this application is true and correct and that I have read and understand the requirements of the Department's rules governing aquaculture.

Signature: Joseph Porada Date: 6/15/06

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

DMR 3

APPLICATION FOR AN EXPERIMENTAL AQUACULTURE LEASE

JOSEPH L. PORADA
P.O. BOX 1624
BLUE HILL, MAINE 04614
PHONE: 207-479-0322
E-MAIL: WOODS1WATER2@YAHOO.COM

1) LOCATION OF PROPOSED LEASE

a) **Vicinity Map:** Attached (A)

b) **Boundary Description:** Attached (B)

*Boundary description is coordinate survey done by John Lewis, Maine Department of Marine Resources

2) LAND OWNERS: Attached (C) No riparian owner of land will be within 1000ft of this site. Names and addresses of all in the vicinity are attached. Access to this site will be from the Trenton Landing.

3) REASEARCH PROGRAM AND OPERATION

a) The purpose and design of the study

*developement toward commercial viability- see MTI grant proposal excerpts below. Grant has been awarded.

" 3a.2.
The proposed fit nicely into the mission of the Downeast Institute, a non-Profit, 501 (C)(3) organization: "*to improve the quality of life for the people of downeast and coastal Maine through applied marine research, technology transfer, and public marine research education.*" We have created a marine business incuabtor to foster working relationships between fisherman and other entrepreneurs to test new ideas that create new economic opportunities. In addition, excellent markets for fresh hard clams exist in eastern Maine in the Ellsworth and Bar Harbor area, however natural production is very low. Typically, this product is eaten raw, on the half shell, unlike soft-shell clams, steamed or used in chowders. Its flavor is milder than soft-shell clams, which is why it has a wider appeal than soft-shell clams outside New England, and with tourists.

3a.3.
This is an applied research project, and MTI encourages and supports research that leads to the commercialization of new products and services. In this case, a successful project will allow DEI to enhance our service to Maine's communities and to the research community. If DEI can help demonstrate the efficacy of hard clam farming in eastern Maine, it is possible that this will open the door to other entrepeneurs who wish to create similar opportunities in Hancock and Washington County.

3.a.5 **Timeline for completion, first phase.**
Broodstock conditioning: March-April 2006: Larval rearing: April 2006; Juvenile growth from size of metamorphosis to 3mm SL; Field trials at the nursery: June through November 2006; Overwintering trials at DEI: November- April 200'/. Final report completed: May 2007.

3.a.6.
.... the effort involves the intersection of research and private business to create new opportunities in eastern Maine for the commercial production of cultured hard clams. A successful strategy to produce hard clam seed in the cold waters of eastern Maine will lead to future attempts to farm hard clams in this region of the Maine coast. The benefit will be two fold: 1) DEI will be able to diversify its shellfish production to meet the needs of local entrepeneurs, and 2) information will be generated to allow Mr. Porada and future hard clam farmers to grow and overwinter hard clam juveniles in an effective manor.

3.a.7. **Next steps, such as commercialization or presentation.**
The second phase, field grow out to commercial sizes, will be investigated beginning in April 2007. To reach that stage, however, it is necessary to investigate the applicability of cold-water techniques for nursery rearing and overwintering hard clam juveniles.....

3.a.8. **Identifiable and measurable outcomes**
The outcomes are straight forward and measurable. First we will condition our selected broodstock in an attempt to spawn these animals (successful). Conditioning protocols are well established (Loosanoff and Davis 1950, 1963). The proportion of animals that spawn and the number of larva produced will be measured. Larval survival to metamorphosis will be estimated. Survival and growth of recently settled hard clam juveniles to 3mm SL will be measured. Effects of stocking density on growth and survival in the nursery trays will be measured. Finally, interactive effects of clam size and density in over wintering cages will be assessed. We will use analysis of variance to test the effects. "

*** This study an dapplication will be expanded and developed over the duration of the lease.**

b) The species, amount and proposed source of organisms to be Grown

- Quahogs (Mercenaria mercenaria), 500-750 thousand organisms, The Downeast Institute (DEI)

c) A description of the culture and harvesting techniques to be used

- Clams will be planted directly into the lease area mud flats w/o structure.
- Harvesting will be accomplished through hand harvesting and with the use of bullrakes

d) The expected length of the study

- Three years

e) Specify whether the research is for scientific OR commercial Research and development

- Research is dual purpose. This research is scientific and commercial in nature with the goals outlined in the grant toward a viable commercial resource

(4) EXISTING USES

- Limited/occasional hard clam harvesting, recreational and commercial. There is a limited population of soft shell clams near shore (mostly a closed area at this time) and none in or near the proposed lease site(s). I and one other harvester use this resource commercially. While mussels grow outside the mean low tide line at the egde and beyond the proposed lease site, there area has never
been used as a commercial resource anyone knows of. There may be may be rare incidental use for mussel harvesting but in the main, mussel harvesting has been non-existent in the area as any kind of traditional use.

- I am the most regular and primary harvester on what is approximately 150 acres of harvestable flats. I use the area 1 to 3 times per week depending on the season. The other harvester is there less than once per week. It is rare to see anyone else harvesting, commercial or recreational.

- There is one boat owner with a mooring in the area, approximately 1800 ft from proposed site. The mooring, when in use, is above the half-tide line. There is no general navigational channel or navigational channel in the area. There is minimal ingress and egress for recreation by kayak and canoe.

(5) EXCLUSIVE USE

- This project will require exclusive use on 6 in acres in the subtidal zone at the edge and center of the low tide line in Goose Cove. Very small clams will be planted in succession and rotation will need to be protected from siltation, digging and any disturbance of substrate while they grow and reach harvestable size toward the fruition of this research and investment goal.

  Worm digging (not likely an issue as blood and sand worms are scarce), clamming (Over 100 acres of harvestable flats are available around the site) and potential mussel harvesting (siltation damage could be extreme) in, near or around the proposed lease site would seriously damage this project. So, I request these activities be restricted within and around the site within a reasonable distance.

  There is no need to restrict fishing for finfish or any current form of navigation.

(6)
A. DESCRIPTION OF PROPOSED LEASE SITE

- This site will work for the aquaculture of hard clams evidenced by the the existing wild population in the area. There is good recruitment and survival of young clams from wild spawning in the cove, indicating low predation and other mortality due to weather such as freezing in the winter.

Also, green crabs are present in only small numbers making their impact through predation, less of a concern than is likely in other areas.
Water temperatures rise early and stay warm longer relative to water Depth, tidal flow and full southern exposure from sunrise to sunset.

1) Bottom Characteristics: generally a mix of mud and sand
2) Mean low tide water depth is less than 2 to 5 inches. Mean high tide depth is approximately 10 ft.
3) Topography: Bottom is flat with slight incline seaward.
4) Plants are virtually or completely non-existent.
   * Blood and sand worms common though not at commercially gainful harvestable levels. Hard clams are moderately abundant. Soft shell clams do exist in the cove nowhere near the site. Mussels are common within the 150 ft of the mean low tide line.
5) Current speed is tidal rise and fall only, north/south
6) Shoreline is rocky over clay with some areas of gravel and cobble. The upland characteristics include forest and field with homes and camps interspersed.
7) There is no aquatic vegetation evident in the area.

B. ENVIRONMENTAL IMPACT

- The husbandry and harvesting techniques used will not impact the physical or ecological environment around the lease site except as follows:

  1) Though not high profile as viewed from shore, corner marker buoys will be visible. Lobster buoy size floats will be used. Stakes (wood) will also be visible and protrude approximately 12 inches above the flats.

  2) Any spawning of cultured clams on the site will result in an increase of recruitment of young clams into the larger part of Goose Cove.

7) STRUCTURES

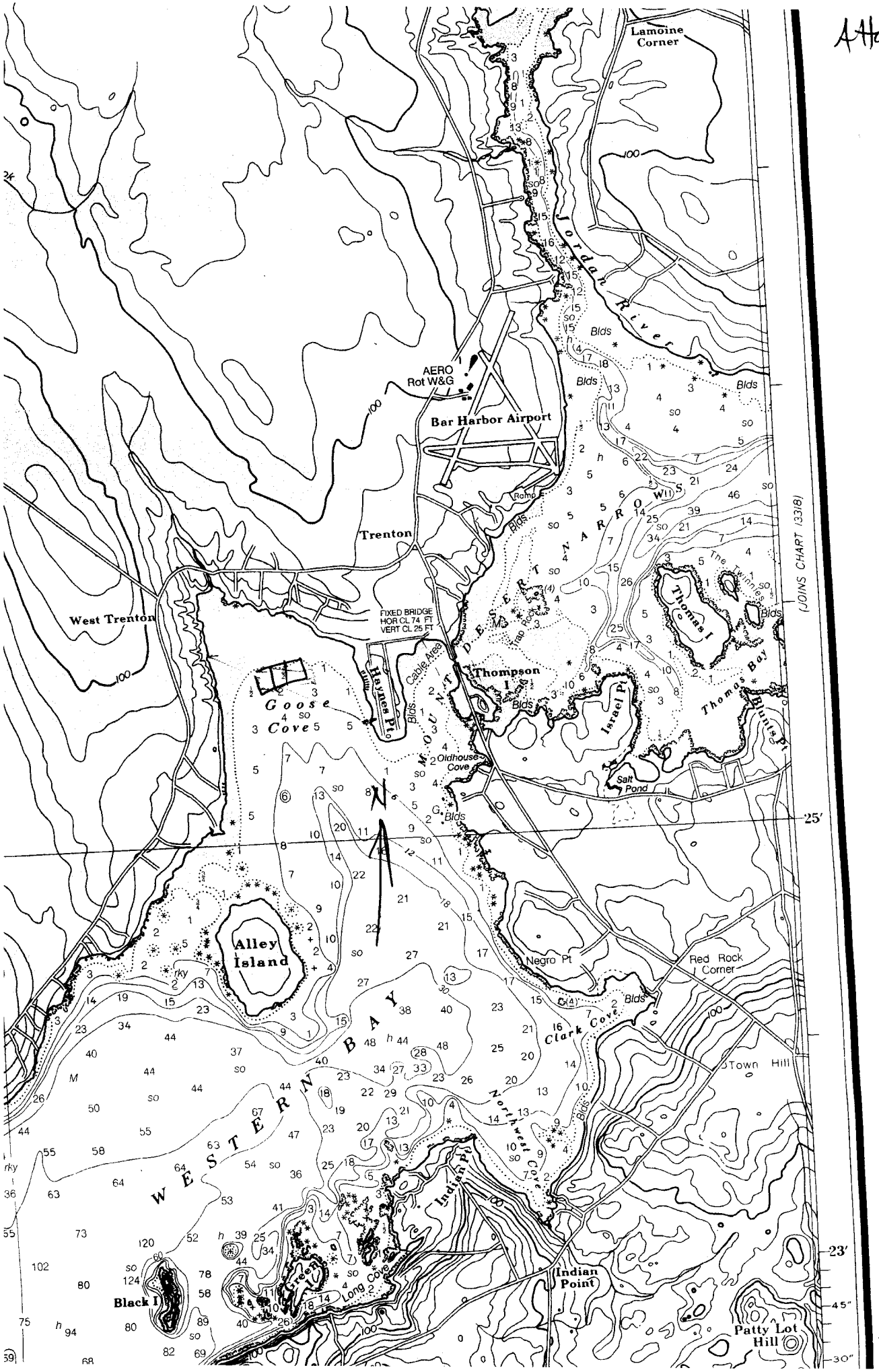
- Not applicable/None

8) DISCHARGE

- None

In addition, it is worthy to note, the existing population of hard clams in Goose Cove is the northern and eastern most known population in the eastern United States. Our project will serve to protect and enhance the existing resource as we are using local clams as brood stock. Seed "drift" from the site and spat produced by spawning of individuals within the site, combined with the likely genetic coupling between seeded and indigenous individuals will enhance recruitment of hard clams substantially throughout Goose Cove.

Attach A+C

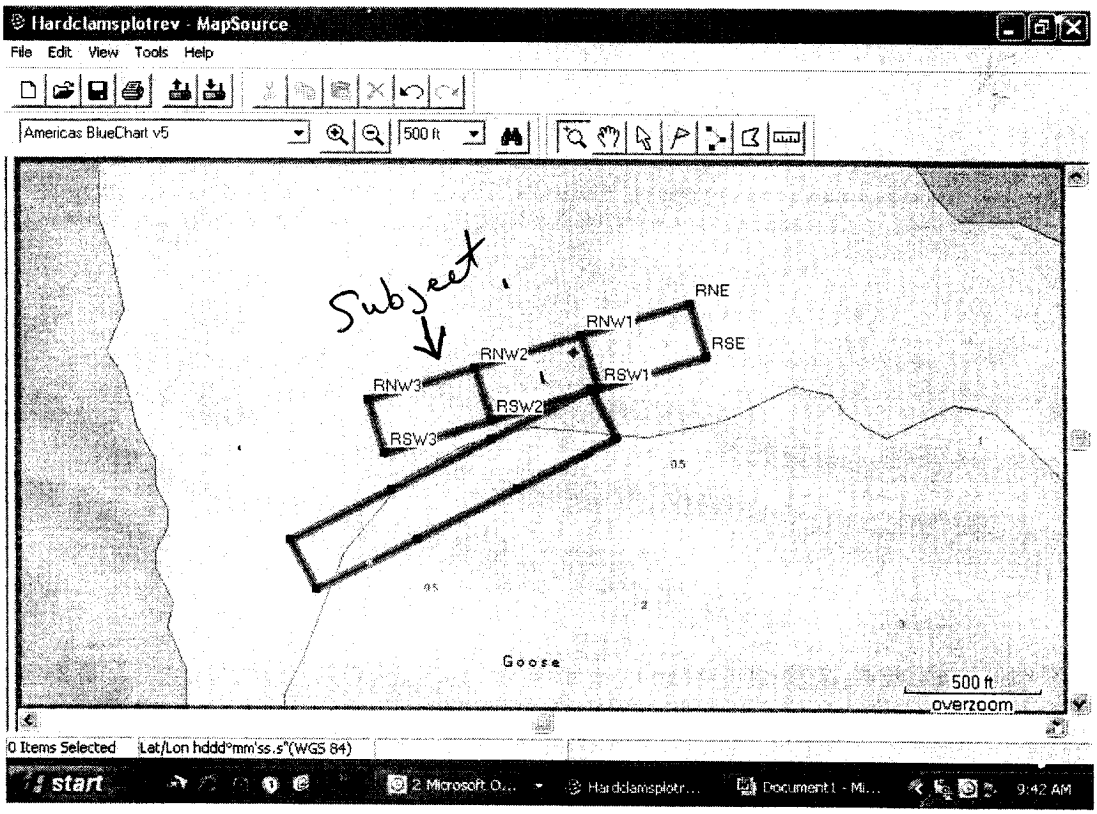

Lamoine Corner
Jordan River
AERO Rot W&G
Bar Harbor Airport
Trenton
West Trenton
FIXED BRIDGE HOR CL 74 FT VERT CL 25 FT
Hayness Pt
Cable Area
Goose Cove
Oldhouse Cove
Mount Desert Narrows
Thompson I
Thomas I
Israel Pt
Thomas Bay
Blunts Pt
Salt Pond
(JOINS CHART 13318)
25'
Alley Island
Negro Pt
Red Rock Corner
Clark Cove
Town Hill
Northwest Cove
Western Bay
Indian Pt
Green I
Long Cove
Black I
Indian Point
Patty Lot Hill
23'
45"
30"

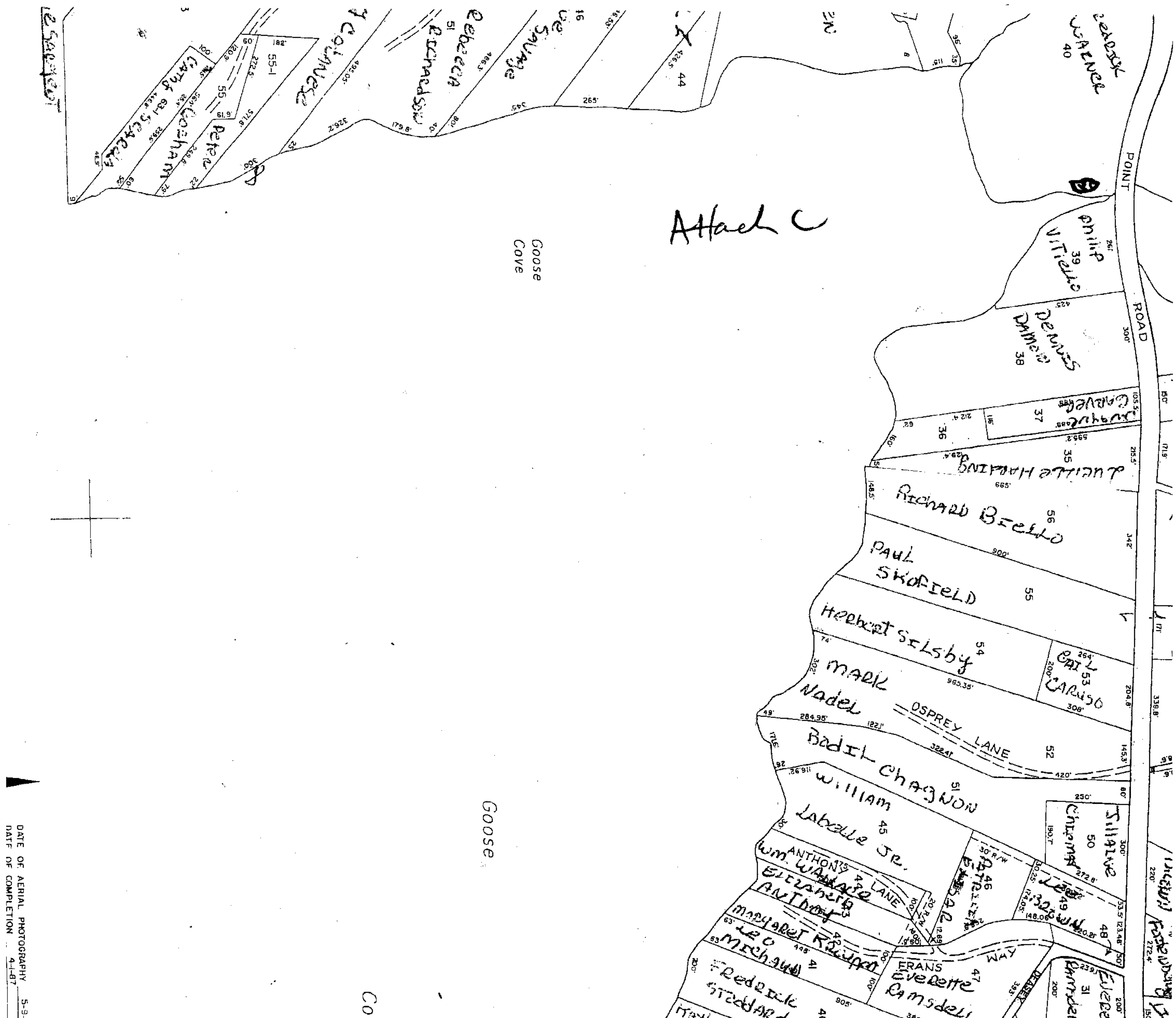
Attach B

Joe - Attached is the way the revised location of your leaseswould plot out. I kept the rock 50 feet inside the northern boundary and 50 feet inside the middle tract. I also shifted the site 10 degrees as you suggested. This is the way it would lay out

The coordinates in degrees minutes and seconds would be (all the corners have an "R" in front of them just for my bookeeping - you can drop them to avoid any confusion) Each lease would be 416 feet East West by 208 feet North South. Bearings around the lease would be 163 deg, 253 deg, 343 deg and 73 deg. Starting at the NE corner and moving clockwise.

NE	44 25 53.217N	- 68 23 05.360W
SE	44 25 51.253N	- 68 23 04.522W
SW1	44 25 50.052N	- 68 23 10.004W
NW1	44 25 52.016N	- 68 23 10.842W
SW2	44 25 48.851N	- 68 23 15.486W
NW2	44 25 50.815N	- 68 23 16.324W
SW3	44 25 47.650N	- 68 23 20.969W
NW 3	44 25 49.614N	- 68 23 21.807W




Attach C
Goose Cove
Goose Cove
POINT ROAD
ROUTE 230
OSPREY LANE
ANTHONY'S LANE
CAPTAIN DOUGLAS LANE
HONEY BEAR LANE
PARADIS DRIVE
DATE OF AERIAL PHOTOGRAPHY 5-9-86
DATE OF COMPLETION 4-1-87
Eastern Ma
Philip Vitiello 39
Dennis Damon 38
Lucille Harding 35
Richard Biello 56
Paul Skofield 55
Herbert Silsby 54
Gail Caruso 53
Mark Nadel
Basil Chagnon 51
William Labelle Jr. 45
Leo Michaud 41
Fredrick Stoddard 40-1
Everette Ramsdell 47
Katherine MacLeod 40
Robert Cameron 38-1
Terry Cyrell 39
John Blodget 38
John Blodget 37
Mark Warren 36
Denise Zeller 35-1
Richard Post
Christine Post 35-1
David Rand 9
Robert Kirkwood 8
Alison Hamor 10
Frederick Warner 40

Attach C

GOOSE COVE, TRENTON, MAINE
LIST AND ADDRESS OF LEASE VICINITY RIPARIAN OWNERS
(all addresses are in Trenton unless noted and are in the order they appear on the tax map, clockwise)

No riparian owners are within 1000ft of any of these proposed sites. This is a list of all owners in the vicinity and their physical address. I will forward complete mailing addresses and certified town tax map. I hope the chart attached covers and will suffice for shoreland description.

	Map and lot #	Address
1) **Kenneth Gray**	**10-63**	**399 Oak Point RD**
2) Cathy Scarola	10-63/1	60 Blackberry Lane
3) Peter Gorham	10-55 & 55-1	56 Blackberry Lane
4) Anthony Cantonese	10-54	
5) Rebecca Richardson	**10-51**	**37 Bucklin Lane**
6) Steve Savage	10-46	30 Hopkins Meadow
7) Gregory Bell	10-45	Oak Point Road
8) David Baldwin	10-42	Oak Point Road
9) Fredrick Warner	10-40	279 Oak point Road
10) Phillip Vitiella	10-39	264 Oak Point Road
11) Robert Johnstone	10-41	
12) Dennis Damon	10-38	256 Oak Point Road
13) Miicheal Voorhees	10-36	244 Oak Point Road
14) Lucille Harding	10-35	230 Oak Point Road
15) Richard Biello	11-56	190 Oak PointRoad
16) Paul Skofield	11-55	
17) Herbert Silsby	11-54	10 pleasant Street, Elllsworth
18) MarK Nadel	11-52	31 Osprey Lane
19) Bodil Chagnon	11-52	30 Osprey Lane
20) William Labelle Jr.	11-45	10 Fran's Way
21) William Wallace	11-44	62 Anthony Lane
22) Ruth Krupa	11-42	3 Anthony Lane
23) Leo James Michaud	11-41	29 & 32 Fran's Way
24) Frederick Stoddard	11-40/1/b	27 Deasy Road
25) Jane Mcleod	11-40	35 Deasy Road
26) Robert Cameron	11-38/a	9 Captain Douglas Lane
27) John Blodgett	11-38	29 Captain Douglas Lane
28) ~~Jane~~ Blodgett (John)	11-37	
29) Mark Warren	11-36	
30) Richard Post	11-35	
31) Denise Zeller	11-35/1	
32) David Rand	11-9	10 Honey Bear Lane
33) Robert Kirkwood	11-8	21 Paradise Lane
34) Donald Wheeler	11-7	37 Paradise Lane